PPE: IT AIN'T JUST FOR LOOKS

KNOWLEDGE

VOL 5 JULY 2011

OFFICIAL SAFETY MAGAZINE OF THE U.S. ARMY

INSTILLING SAFETY AWARENESS

- DIVER TRAINING
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U.S. ARMY COMBAT READINESS/SAFETY CENTER

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Mission statement: The United States Army Combat Readiness/Safety Center (USACR/Safety Center) supports our Army by collecting, analyzing and communicating actionable information to assist Leaders, Soldiers, Families and Civilians in preserving/protecting our Army's combat resources.

We welcome your feedback. Please e-mail comments to **safe.knowledge@conus.army.mil.**

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Knowledge provides a forum for Soldiers, Leaders and safety professionals to share best practices and lessons learned and maintain safety awareness. The views expressed in these articles are those of the author and do not necessarily reflect the official policy or position of the U.S. Army, Department of Defense or the U.S. Government. Contents are specifically for accident prevention purposes only. Photos and artwork are representative and do not necessarily show the people or equipment discussed. Reference to commercial products does not imply Army endorsement. Unless otherwise stated, material in this magazine may be reprinted without permission; please credit the magazine and author.



As your director of Army safety, it gives me great pleasure to welcome the newest member of our command team, Command Sgt. Maj. Rick Stidley. He comes to us from the great Marne Division, where he served in numerous leadership positions and most recently as the command sergeant major for the 3rd Combat Aviation Brigade, Hunter Army Airfield, Ga. With a 32-year Army career and past deployments to Grenada, Panama, Iraq and Afghanistan under his belt, Command Sgt. Maj. Stidley brings with him a sincere and profound understanding of the safety issues facing our Soldiers today. Look for his welcome column in the August issue of Knowledge.

ALWA

This month, the United States of America turns 235 years old. It's amazing to think how, during that short time, our nation has emerged from a fledgling democracy to the global leader it is today. The work you do every day ensures the sacrifices of past patriots will live on for generations to come. I am proud to be part of this great Army and have the opportunity to work alongside each of you. Thank you all for your service!

In Army safety, we spend a lot of time talking about off-duty accidents. This makes sense, because every year a vast majority of our accidental fatalities occur away from work. For example, as of June 1 this year, the off-duty share of all losses was a staggering 85 percent! That number illustrates two points: first, on-duty safety remains a great news story for the Leaders and Soldiers with their boots on the ground in locations at home station and in our overseas theaters; and second, off-duty accidents continue to be the most critical safety issue facing our Army today.

On duty, our biggest gains have been in reducing fatal Army motor vehicle accidents to unprecedented lows. In fact, as of June 6, AMV fatalities were down 80 percent from the previous year. That's an extraordinary accomplishment, especially considering the hundreds of thousands of miles driven every year in all models of AMVs, both in garrison and in theater. This statistic proves we've come a long way from the early days of our combat missions in Iraq and Afghanistan, when on-duty AMV losses soared to historic highs. Although safety upgrades and greater familiarity with equipment have had a lot to do with our recent successes, much of the credit is owed to superb leadership and hands-on engagement from Soldiers at all levels. Whether it's to remind another Soldier to buckle their restraint system or call out a driver who's exceeding the safe speed limit, those who do the right thing



AYS ON GUARD

for safety show their commitment to the warrior ethos of never leaving a fallen comrade behind.

Given this amazing success on duty, it would be easy to assume we'd see a corresponding reduction in privately owned vehicle fatalities. Reality, however, is far different from this assumption. Although POV fatalities have been on a downward trend the past few years and currently remain below 2010 numbers, the grim fact is nearly 70 percent of the Soldiers lost during this fiscal year have been killed after hours on civilian roadways. How can a Soldier safely drive a multi-ton vehicle during the day but lose control of a small sedan or even smaller motorcycle at night or on the weekend? There are any number of contributing factors to fatal POV accidents, but the "big three" are almost always constant — speed, failure to wear seat belts or personal protective equipment and driving under the influence of alcohol.

The question we should all be asking is why our on-duty mindset isn't transferring to the off-duty realm. Our Soldiers know what to do and our Leaders do a fantastic job in enforcing standards on the job. But both Leaders and Soldiers must remember there is no time limit on responsibility, and their obligations to one another extend even after duty hours. Reminding a friend to buckle up or slow down is just as effective in a sedan as in a HMMWV. The key is engaging and never letting your Soldiers become complacent. Leaders should also tap into the Families within their units for support. Their access and influence make spouses and other close loved ones a great line of defense in keeping Soldiers safe.

Our mission here at the USACR/Safety Center is to help our Total Army Family —Leaders, Soldiers, Family members and Civilians — stay safe in all they do. POV safety is obviously a primary concern and we have many driving tools available on our website, https://safety.army.mil, but that's not all we have to offer. Be sure to check out our other products and let us know what else you need to make your safety program a success. You can start with our Safe Spring/Summer Campaign, which contains ready-made posters, videos and feature articles covering a wide range of topics related to warm weather activities.

Thank you all again for what you do every day. As you celebrate our nation's birthday, I ask that you take a moment to think about what more you can do to keep our Soldiers safe. Protecting our Band of Brothers and Sisters is the greatest birthday gift America could receive!

Army Safe is Army Strong!



WILLIAM T. WOLF
Brigadier General, USA
Director of Army Safety

BREAKING THE

The UH-60 crew had just returned from a 12-month deployment. They were re-integrating into the routine flight training of the commander's task list. After a long, accident-free deployment in a challenging environment, flying in their own backyard didn't seem all that risky.

This all-too-common mindset is prevalent in Army aviation. As Army aviators, we are conditioned to believe we are "Above the Best." This is a necessary belief for us to complete the most difficult tasks. Unfortunately, when asked to complete the less difficult tasks, we often do not give them the same attention to detail in all aspects of planning and preparation. The problem this night wasn't that the task was easy, but the perception that it was easy because so many aviators had accomplished it before, including those crewmembers flying this Black Hawk.

The tasks flown this beautiful night under night vision goggles were Task 1155, Negotiate Wire Obstacles, and Task 2024, Perform Terrain Flight Navigation. The crew was transitioning from nap-of-the-earth flight with the intention of doing an over-wire crossing at a known and approved wire obstacle. Regrettably, on this night, the training flight ended abruptly when the UH-60 contacted two static lines associated with high-tension power lines.

First, I want to make something clear. This is not about pointing fingers or blaming individuals. We must all learn from this mistake — or should I say from these mistakes because there were several opportunities to prevent this accident if a link had only been broken.

In our training, we have all heard



CHAIN

CHIEF WARRANT OFFICER 5 JAMES L. CHANLEY
63rd Theater Aviation Brigade
Kentucky Army National Guard
Frankfort, Ky.



> **"ACCIDENTS HAPPEN** because no one **BREAKS** the **LINK** to a **SEQUENCE** of events **LEADING UP** to them."

of the infamous accident chain and the connecting links that lead to an aircraft accident. If at any point leading up to the accident a link is broken by a sound decision, the accident is prevented.

This training flight was originally a two-ship mission. However, the first aircraft, which had an instructor pilot and air mission commander onboard, was mission briefed but had to cancel due to a maintenance issue found on preflight. The second aircrew decided to continue their training flight, although they had never been briefed directly from the briefing officer. Since this training flight entailed terrain flight with a wire obstacle, a face-to-face briefing discussing the hazards and techniques of negotiating a wire obstacle might have been enough to break this link.

The crew was familiar with this route; however, this particular wire obstacle was actually an underwire crossing. Yet on this night, the crew felt they would mitigate the risk by crossing over the wires. On the surface, this sounds like a good decision; however, GPS waypoints used in conjunction for an underwire crossing are plotted between the stanchions, not directly over them. This would have been the place to cross when flying over a wire obstacle. In addition, as the crew continued on the route

and the GPS was counting down their distance, they attempted the wire crossing without seeing the wires. This also might have been enough to break the link.

Aviation accidents come in all shapes and sizes. However, accident reports have concluded that nearly 90 percent of aviation accidents have human factors as the primary cause. To quote Pogo, "We have met the enemy and he is us!" When I say "us," I am not merely assigning that position to the individuals in the front seat of the aircraft. This can apply to commanders, briefers, crew chiefs or the line guy who sees something that doesn't look right, but never speaks up. Usually when an accident occurs, it doesn't just happen unless it is a mechanical failure. Accidents happen because no one breaks the link to a sequence of events leading up to them.

Fortunately, for this crew, the Wire Strike Protection System and a lot of luck were in their corner on that night and they walked away without a scratch. We might not be so lucky next time if "you" are not willing to break the chain.«




icon
MIL-SPEC

it ain't just FOR LOOKS

JERRY HOLLENBACK
Dugway Proving Grounds
Dugway, Utah

It was a warm July afternoon and I was getting ready to go across town for a get-together with a group of other riders. I had a helmet, but it was not required in the state where I lived. The year was 1978, and I had just gotten out of the military after doing one tour. Hairstyles in the 70s were, for the most part, long, and I felt the need to grow mine since I had to keep it so short in the military. At the last minute, I decided to wear my full-face helmet since I knew it would keep the bugs out of my long locks. Man, I'm glad I did.



After about 15 minutes of riding, I hit a state road where the speed limit increased to 55 mph. I saw a white pickup coming from the opposite direction and noticed a couple of guys in the pickup's bed. There was no other traffic, and I remember squinting because I was riding into the sun.

All of a sudden, I felt like someone had hit my head with a baseball bat. The impact almost knocked me from the bike. The helmet's face shield was covered with a red fluid, obscuring my vision and confusing me even further. Fortunately, I was able to direct my motorcycle to the shoulder and stop. Shaking, I removed the helmet expecting to see bird parts. I was certain that the red fluid was bird blood, and all I kept thinking was that a big bird had impacted me at 55 mph. Imagine my disbelief when I removed my helmet and discovered it covered with pomegranate juice and seeds.



> "MAKE SURE your BIKE is MECHANICALLY ready for the ride and that YOU are MENTALLY and PHYSICALLY prepared."

It was at that instant I realized the guys in the back of the pickup must have heaved a pomegranate at me. Without thinking, I mounted my motorcycle and sped after them. By now, they were already a couple of miles in front of me, but I knew I could catch them. After chasing the pickup for about 5 minutes, I had closed the gap to about a half mile. It was at this point that I realized a couple of important points. First, I was alive and unhurt, but I was speeding down the road with a blurred visor, chasing a pickup in a fit of rage. Second, even if I had managed to get the pickup to pull over, then what? Reality set in and I gave up the chase. I pulled into a nearby gas station and was able to get some water to clean my face shield. As I took a couple of deep breaths, I gave thanks for the fact that I was unhurt and pondered the events.

I had been going at least 55 mph and the pickup was probably going at least as fast as it came at me. A pomegranate — a fruit as hard as a baseball — was chucked at my face with the velocity of a fast pitch. What if I had not worn my helmet? With my helmet, I was barely able to maintain control.

A sobering feeling swept over me. Next, I thought about the altercation I almost got in. Had I caught up with the truck, what if he'd decided to use his vehicle against mine? A truck against a motorcycle is an unfair fight. Finally, what if we both stopped in a safe location? Then what? There were at least three of them against me.

This experience taught me many great life lessons. First, my helmet almost assuredly saved my life. Second, I can't allow my emotions to get the better of me.

Whether riding on my bike or in my car, I can't let other drivers provoke me to react with rage. Finally, I vowed to pay more attention to my surroundings. Whether it's a short drive across town or a cross-country trip, you can't allow yourself to become complacent. Make sure your bike is mechanically ready for the ride and that you are mentally and physically prepared.

I'm in my 50's now, and my hair is much shorter. I still ride motorcycles, and I always wear my helmet — except now I wear it for protection instead of vanity. Every time I see riders not wearing helmets, I wonder what it will take to get them to wear one. I hope they'll change their ways before someone, whether by accident or intentionally, makes them a fatality statistic.«

RIDE FOR YOUR LIFE

The Motorcycle Mentorship Program establishes voluntary installation-level motorcycle associations where less experienced riders and seasoned riders can create a supportive environment of responsible motorcycle riding and enjoyment. This can create positive conduct and behavior and serve as a force multiplier that supports a commander's motorcycle accident prevention program.



MMP
MOTORCYCLE MENTORSHIP PROGRAM

Check out the USACR/Safety Center MMP website for some examples of active mentoring programs.

https://safety.army.mil/mmp/



ARMY STRONG

U.S. ARMY COMBAT READINESS/SAFETY CENTER

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SEEING IS BELIEVING

STAFF SGT. EDUARDO A. ALEGRIA
U.S. Army Aeromedical Research Laboratory
Fort Rucker, Ala.

When I deployed to Iraq as a cannon crewmember with the 101st Airborne (air assault), each Soldier in my unit was supplied with two pairs of goggles. One pair provided protection during air assault missions, while the other offered ballistic protection. Even though the unit Leaders instructed us to use our goggles, the matter was not strictly enforced. Therefore, some Soldiers placed their goggles on their helmet. As a result, many Soldiers suffered eye injuries, and some even lost their eyesight.

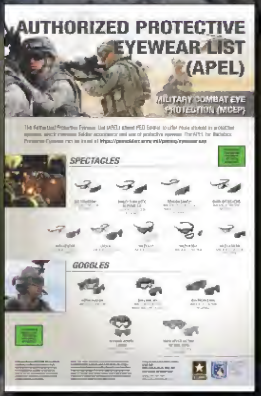
During my second deployment, this time to Afghanistan as a combat medic with an artillery unit, my unit leadership, like that of my air assault unit leadership in Iraq, instructed us to use military combat eye protection (MCEP). However, this time the MCEP-use standards were enforced. All Soldiers were ordered to use their protective glasses, even during night. This meant we had to change the lenses in our glasses twice a day — gray lenses for daytime and clear lenses for nighttime.

Getting into the habit of wearing MCEPs 24 hours a day and changing the lenses was very difficult. Honestly, it was a pain. But as my deployment progressed and I witnessed firsthand what shrapnel did to the eyes of Soldiers who were not wearing MCEPs, wearing eye protection became extremely important to me. In no time, it became second nature. I knew the most important thing I could do to protect my eyesight and that of my fellow Soldiers was to wear approved MCEPs.



DID YOU KNOW?

According to statistics from the U.S. Army Public Health Command (Provisional), the average Soldier who suffers an eye injury is an E3 to E5, 20- to 24-year-old male, who is struck by an object while performing combat soldiering, participating in sports or doing maintenance, repair or servicing. He is not wearing eye protection and will lose an average of 6.1 workdays at an average cost of $9,724 because of the injury. To learn more about authorized eyewear, go to https://peosoldier.army.mil/pmseq/eyewear.asp.





I am currently assigned to the Sensory Research Division of the U.S. Army Aeromedical Research Laboratory (USAARL). I have the privilege to work alongside vision scientists and eye care providers who study combat eye injuries and how to better protect Soldiers' vision. Now, more

PROTECT THOSE

WAYNE COMBS
U.S. Army Public Health Command (Provisional)
Aberdeen Proving Ground, Md.

Many eye injuries are avoidable if Soldiers use common sense to protect their vision and Leaders ensure their Soldiers wear appropriate eye protection. Keep the following tips in mind to protect your vision at work and home.

At Work

- Follow eye safety signs and procedures.
- Know what to do if a hazardous material splashes into the eye. Know where the nearest eyewash station is and how to use it.
- Always wear approved eye protection for mechanical, chemical, biological or radiant energy (from such sources as welding, lasers or sunlight) hazards. According to the American National Standards Institute (ANSI), the industry code "Z87" must be marked on the side of protective eyewear. For training and operational duties, a ballistic standard is required. Military Combat Eye Protection (MCEP), approved by Program Executive Office (PEO) Soldier and labeled APEL (Approved Protective Eyewear List), significantly exceeds ANSI Z87 standards and meets this requirement.
- Make sure eye protection is clean and in good shape.
- Do not wear contact lenses in areas where there is smoke, dust or fumes, or when training or deployed.
- Report eye hazards to supervisors.
- If an eye injury occurs, immediately call emergency medical services.

than ever, I understand how important eye protection is; how the eyewear is designed to protect a Soldier's vision from dust, wind, sunlight and shrapnel/ballistic fragments; and how much work goes into providing Soldiers with the safest eyewear available.

For many years, USAARL has evaluated the ophthalmic characteristics of eye protection and provided recommendations to industry and project managers to ensure the eye protection worn by Soldiers meets military requirements. This means when a Soldier puts on a pair of MCEPs included on the Authorized Protective Eyewear List (APEL), he or she is wearing eye protection that has been tested by vision experts and approved by users.

Other ways USAARL is working to protect Soldiers' vision includes identifying ways to reduce the incidence and severity of combat eye injuries and methods to increase Soldiers' use of eye protection in combat. In addition, USAARL is investigating the relationship of eye injuries caused by the initial pressure of a blast (as opposed to secondary effects of the blast, e.g., shrapnel) and the use of protective eyewear. USAARL is also developing methodologies and standards to better assess the effectiveness of protective eyewear.

The Army keeps moving forward to better fit Soldiers for battle. As Soldiers, we can feel confident knowing that when we wear MCEPs, we are reducing the likelihood of sustaining an eye injury.«

PEEPERS



At Home

- When outside, wear sunglasses that absorb the sun's harmful ultraviolet (UV) rays. Both clear and tinted MCEP lenses provide UV protection. A broad-brimmed hat also helps protect the eyes.
- When working on cars or around the house, be aware of eye hazards. Mechanical hazards such as rust or flying objects, chemical hazards such as battery acid and radiant hazards are common in the home shop.
- Wear approved eye protection. Safety glasses and goggles should have ANSI Z87 markings on the side. Remember, MCEP exceeds safety glasses standards and can also be worn when working at home.
- Always wear appropriate approved eye protection when playing sports. For eye-hazardous sports such as racquetball, wear American Society for Testing and Materials-approved eyewear that contains protective lenses.

In addition to the tips above, it's a good idea to have an eye exam every two or three years, or sooner as directed. Early detection and correction of eye problems is important. Above all, use common sense and protect your vision.«



INTO THE THIN AIR

CHIEF WARRANT OFFICER 3 MARK S. LAUER
Company C, 1/150th Aviation, Task Force Vortex
Camp Bondsteel, Kosovo

Our mission was to play "elevator" for pararescue personnel training and qualifying with the square parachute. Our task was to pick up as many jumpers as we could in our Air Force UH-1N, take them up to 13,000 feet and have them jump out. It was a cool November day in the California high desert, and we weren't worried about power limits due to temperature. The mission was pretty simple to execute — that is, until it took a bad turn for us.



We started out the day with a pre-mission brief that included all the jumpers and my aircrew. The jumpers then rode a bus to the jump site while we prepared the aircraft for the mission. The preflight, start up and flight to the practice area all went without incident, and we arrived for our first "stick" of jumpers. It took us some time to climb to altitude, as we were loaded with gas and had a full cabin. Each follow-on jump went just as the one before, and we soon needed to return to base to refuel. Once we'd refueled the aircraft and gotten a meal, we returned to the jump site for another set of lifts.

As we started our second hour, boredom set in. While we were leveling off for the jump, my co-pilot rogered my call of 13,000 feet and then I heard a very weird laugh. That caught my attention and I looked over at him to see what was so funny. What I saw wasn't funny in the least. My co-pilot looked back at me with bluish lips and a big grin that made me wonder about hypoxia. I then pulled off my own gloves to look at my nail beds, which were also a blue shade. I said that we were finished once the jumpers were away and my co-pilot looked at me, laughed and asked, "Why?"

As the jumpers departed, I took control of the aircraft, started a descent and called the ground party to notify them we were returning to the airfield for fuel and a crew change. I then contacted the operations center and arranged for another crew to go out and finish the final two hours of lifts that day. Once we were on the ground, I pulled my crew together for a debrief and told them that once we were finished, we were all going to the flight surgeon's office to get checked out. I explained to the flight surgeon what had transpired and he looked over everyone. Once we received a clean bill of health, we returned to the unit, where I talked with the commander and safety officer about crew limits on high-altitude flying. I recommended each crew be limited to only two lifts of 2.5 hours' duration per day and that those flights be separated by another crew flying a 2.5-hour flight.

What had seemed a simple flight requiring little skill on the aircrew's part took an interesting, and potentially deadly, turn. As in this case, the effects of hypoxia can be cumulative. Because of that, keep an eye on your crew and use situational awareness to watch for hidden hazards in each mission and flight. The composite risk management worksheet showed an overall low risk for this mission — that is, until we found good reason to elevate the risk. Initially, we believed the risk of hypoxia was removed as long as we limited ourselves to a maximum of 30 minutes above 10,000 feet. However, the cumulative effects of repeatedly operating at above that altitude on a cold day unexpectedly increased our risk. Fortunately, we learned that lesson without having to sacrifice an aircraft and crew to pay for it.

FYI

For related reading on the effects of hypoxia and ways to help keep crews safe during high-altitude operations, check out the story "Better Air for Aircrews" online at https://safety.army.mil/knowledge_online/february2010/.



A few years ago when I was a member of a search-and-rescue team in Colorado's Rocky Mountains, another team asked our help in locating a lost hunter. We responded and I went as part of a three-man all-terrain vehicle (ATV) team. I recall that it was a beautiful, clear, cold, crisp morning as we drove south to the Sangre de Cristo Range.



DEATH IN THE HIGH COUNTRY

CHIEF WARRANT OFFICER 2 PETER BIESSENER
11th Theater Aviation Command
U.S. Army Reserve
Fort Knox, Ky.



The search base was busy when we pulled in, as teams from at least four other counties were preparing their gear. Our team lead reported to the command center as we unloaded our ATVs, powered up our global positioning systems, located ourselves and surveyed the area on a topographical map. As searchers, we wanted to begin with an upbeat, optimistic attitude even though many of us had been involved in searches that didn't end well.

The subject of this search was an elk hunter from Texas, a male in his late 50s who couldn't hike long distances or up steep terrain. He was there with eight members of his extended family. He hunted the area the previous year and had set out alone the day before on his ATV. He had warm clothes, some snacks, a rifle and a handgun, but hadn't told anyone where he was going. Additionally, we were to use caution if we located him because he suffered from paranoia and didn't have his medication with him. He was lost, cold, hungry, paranoid and armed — all details that set off alarms for my team. We loaded our gear, made radio checks and headed toward our search area.

Our initial search took us about three hours as we moved fast, covering 40 miles of trails. We returned to base for fuel and to report clearing those trails. We'd spotted a



BEFORE YOU

Here are the ATV Safety Institute's Golden Rules:

1. Always wear a Department of Transportation-compliant helmet, goggles, long sleeves, long pants, over-the-ankle boots and gloves.

2. Never ride on paved roads except to cross when done safely and permitted by law; another vehicle could hit you. ATVs are designed to be operated off highway.

trail heading up a high ridge outside our search area and suggested it to the command center as our next area. The trail headed toward a very remote high-altitude basin and, knowing what we did about our missing hunter, we felt it warranted searching.

My team headed up the high-ridge trail. Our plan was to work our way up to a meadow at 11,000 feet. After an hour and a half of searching side trails going up the ridge, we found the hunter. He was about 50 feet downhill from the trail with his ATV on top of him. When we got to him, he was dead. The way his hands grasped the ATV, it looked like he was trying to lift it off himself. He'd kicked vegetation and dirt away as he struggled until he could no longer breathe, crushed by the ATV on his chest.

We wondered what had happened. While we waited for the coroner and a recovery team, we looked for answers. The trail was pretty steep and cut into the side of the ridge with a 2- to 3-foot ledge on the uphill side. We saw where he'd been riding downhill and his right front tire had hit an exposed tree root on the uphill cut of the trail. This caused his ATV to go off the trail. He'd been riding alone without wearing any safety gear.

RIDE

3. Never ride under the influence of alcohol or drugs.

4. Never carry a passenger on a single-rider ATV, and no more than one passenger on an ATV specifically designed for two people.

5. Ride an ATV that's right for your age.

6. Supervise riders younger than 16; ATVs are not toys.

7. Ride only on designated trails and at a safe speed.

8. Take a hands-on ATV RiderCourse and the free online E-Course. Visit ATVSafety.org or call 1-800-887-2887.

We also saw other clues of what happened at the crash site. There was a gun scabbard mounted on the ATV's right side, attached near the footrest and at the rear rack. The scabbard probably hooked him and caused him to roll with the ATV. We also noticed the ATV's tires were inflated extremely hard — more so than seemed right for the circumstances. We got the ATV back onto the trail and found it was still drivable. However, the person who drove it down the mountain said it was hard to control until we lowered the tire air pressure. Did the overly firm tires cause him to go off the trail after hitting the tree root? Was he coming down in the dark and didn't see the tree root? We concluded that if there'd been another ATV rider with him, he'd probably have survived.

Sadly, instead of his hunting trip ending with game, it ended with grief. That's not how it should have been. All-terrain vehicles are fun and designed to be useful machines for hunters and others who like going into the wild. But useful as they are, riding an ATV without identifying the risks and planning to be safe can be a very unforgiving experience.«



READY FOR THE RISK?

GRAT
GROUND RISK ASSESSMENT TOOL

https://safety.army.mil

GRAT is easy to use and provides users with accident hazard and control information and assists them in producing an automated CRM worksheet (DA Form 7566) for their mission, task or activity. Users can save, e-mail, edit or print the worksheet.

GRAT-S
http://safety.army.smil.mil

GRAT-S is now available and allows Leaders in forward-deployed units access to GRAT on the SIPRNET.



While traveling on a moonless night, I sat in a Mine Resistant Ambush Protected (MRAP) vehicle. I was operating the remote-controlled arm of the Buffalo in our search for improvised explosive devices (IEDs). These roadside bombs were re-seeded every day by insurgent groups, so we searched the same highways and roads endlessly to ensure the safe passage of troops, supplies and the civilian populace.

INSTILLING SAFETY AWAR



ENESS

RETIRED CHIEF WARRANT OFFICER 4 MICHAEL HAMPTON
36th Engineer Brigade
Joint Base Balad, Iraq

As we traveled down a main supply route, our lead vehicle struck one of these deadly devices. "Blast, blast, blast!" is what we heard over the headset, followed by, "Rollover, rollover, rollover!" Sitting in the patrol's second vehicle, I saw it all — the blast and the vehicle rolling — but I was helpless to prevent the horrific chain of events. As per our battle drill, the remaining vehicles continued to their security positions and conducted secondary sweeps.

Upon reaching the disabled vehicle, we jumped from our MRAP and sprung into action, hitting the ground with weapons drawn. We were unable to open the rear hatch to extract the team because the combat lock was engaged. Looking through the hatch window, I saw every member of the team was unconscious. It was evident several had been thrown around inside the vehicle. My immediate thought was, "You've gotta be kidding me. No seat belts?"

Unfortunately, this scenario plays out every day. We're losing more Soldiers to acts of negligence than combat operations. Why? A theater engineer brigade is a unique organization with many diverse missions (route clearance, construction, bridging operations, etc.) that pose numerous challenges. In the age of modularity, a brigade, battalion and even a company can deploy into a hostile environment without its indigenous units. The elements that now have the possibility to fall under our commands, besides the regular Army units, include National Guard and Reserve components from the Army and Air Force as well as multinational coalition forces. The most important of these challenges is to instill the same level of safety awareness in all of these units.

With a formation comprised of thousands of Soldiers, Sailors and Airmen, how do you instill a common practice that may be foreign to some of these service members? There are several key factors to help you be successful in this endeavor: command influence/leadership engagement, dissemination of a viable safety program and battlefield circulation.

Leadership

Leadership engagement is the backbone of a successful safety program. Show me Leaders who are engaged in their safety program, and I'll show you a successful safety program. While conducting accident investigations as a safety representative, if I found the program was broken (no policies or procedures, no subordinate Leader engagement, no training, no safety awareness), I typically found the command was apathetic.

"Green-tab" emphasis is a vital part of a successful program. Units that have a program without policies and procedures in place can still be effective if the leadership is engaged, but the converse is not true. Written procedures alone do not make a successful program; the application of those procedures by Leaders does. Having a

> "As **LEADERS**, it's our **RESPONSIBILITY** to **INSTILL SAFETY** awareness in the **SOLDIERS** in our command."

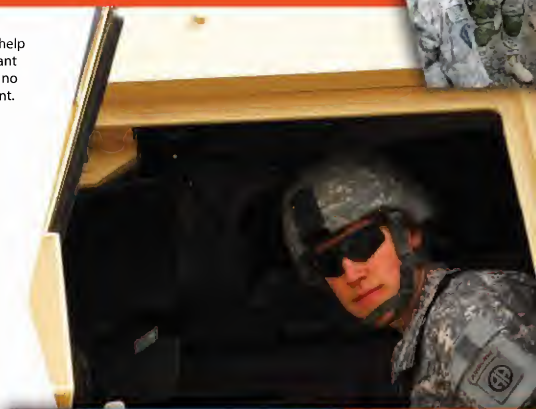


safety professional in the ranks will help get the program online and compliant with military standards, but there is no substitute for leadership involvement.

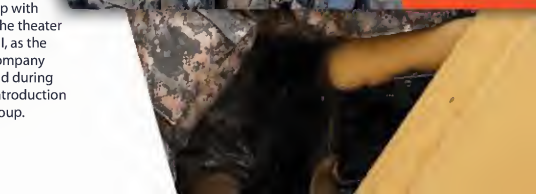
Dissemination of the Program

Another critical key factor is disseminating the program to subordinate units. This does not imply that simply pushing data to them electronically is sufficient. We must travel to their locations, sit down with Leaders and have face-to-face conversations. As a safety professional, your approach is critical at this point. Like any first encounter, there is a "feeling-out" process as you and the Leaders get to know each other. You are also there to ensure subordinate commanders understand the full spectrum of their safety responsibilities.

Another important note here is an accident investigation should not be the first time Leaders get acquainted with their safety manager. You should personally make every effort to engage units before they enter the theater or your formation. (For example, I travel to Kuwait to meet with the command teams of each battalion and company coming into theater under this command. I encourage battalion additional duty safety representatives to link up with individual companies coming into the theater that will fall under their command.) I, as the brigade representative, visit each company that falls under a battalion command during their relief-in-place process for an introduction and in-brief with their command group.









During this meeting, I aim to establish an engaging climate.

Commanders are Leaders and mission focused; they rely on assets to accomplish their missions, whatever their assigned task may be. You have to become one of those assets for them and not the stereotypical inhibitor. Offer training for their safety representatives and formations, policy production, answer data requests and assist them in developing programs to improve their organization's effectiveness and overall operation.

Another critical piece of this encounter is to ensure them you will never forward information to your commander without first briefing them. For example, "Sir, I will brief you and your team on anything I am going to take back to the commander that your team may have to explain." If you cannot out-brief them immediately, then hold the data — unless it is life threatening — until you have a chance to contact them. I have found that commanders at all levels are more responsive if you allow them to correct deficiencies on their own without the notification of their bosses. If the correction cannot be made at that level, it needs to be elevated anyway. If it can be handled at their level, there is really no need to report it to their higher commander — unless it is life threatening and appropriate actions have not been taken to mitigate the hazard. As a safety representative, it's your job is to keep issues off the commander's desk, not put them on.

Battlefield Circulation

A third key factor is battlefield circulation. This is executed by all Leaders and safety representatives. I attempt to visit each formation every month. My visit, along with commanders, senior NCOs and subordinate safety representatives throughout the formation, instills genuine concern of well being and involvement in each Soldier's life. Conducting route clearance or personal security missions is not in my mandate, but it is absolutely necessary to get to know what the Soldiers go through and the issues they face on a daily basis. Route clearance, construction projects (vertical or horizontal), bridging and dive operations are all part of this multifaceted organization, and you must learn the intricacies of each mission.

As the theater engineer brigade, we have elements throughout the Iraq Joint Operations area. This geographical dispersion demands extensive travel — normally five days out of every week for the entire year. This is important and pays huge dividends, as it allows commanders and organizational members to gain trust in you. Be responsive; an asset is no good to a commander if they cannot get their hands on it. If a commander needs your assistance, go to him or her. This demonstrates a strong sense of purpose and personal commitment.

Conclusion

It's our responsibility to instill safety awareness in the Soldiers in our command. These three key integration components are essential in establishing a safety program that meets or exceeds standards and demonstrates a genuine concern for the units we support.

WEATHERING THE STORM

CHERYL RODEWIG
The Bayonet
Fort Benning, Ga.

Fort Benning, Ga., officials believe the lack of injuries during recent severe weather was a direct result of the effective use of composite risk management (CRM). Winds speeds reached 100 mph when a small tornado touched down during the Best Ranger Competition, but there were no injuries or close calls among the many Ranger teams, Soldiers and personnel scattered across the Harmony Church cantonment area. That's no coincidence, said Kestner Edens, mission safety manager for the installation safety office.

"If it wasn't for the leadership and their thought process, it could have been worse," Edens said. "Composite risk management is the Army's decision-making process for identifying hazards and controlling risk across the Army's full spectrum of missions, operation, functions and activities. You identify the hazard. You develop the controls. You make your risk decision. Then you're going to implement your control measure(s)."

Since the 4th Ranger Training Battalion (RTB) regularly conducts high-risk training and events, unit personnel are familiar with the precepts of CRM, Edens said.

"They have standard operating procedures in place to help conduct a safe stand down," said Edens, who oversees training and provides commanders feedback on the best way to mitigate any hazards. "If lightning is striking within a certain proximity, they go into a lightning lockdown. They wait for the storm to pass before they move on to continue their operations."

Weeks ahead of the competition, unit leaders planned specific procedures to follow for all anticipated risks, including the potential of inclement weather, said Lt. Col. Jeremy Miller, commander of the 4th RTB. The safety procedures were then rehearsed at company, battalion and brigade levels.

"Weather conditions were closely monitored every 12 hours beginning five days prior to the execution of the competition," Miller said. "Weather monitoring continued hourly throughout the first day of the competition."

As forecasts predicted the weather and wind speeds would worsen, Miller postponed the start of the orienteering event. After reports of damage from hail and wind, competitors moved to a secure lightning holding area, where they waited until the storm moved north and it was safe to begin the event.

Once the event started, safety was kept at the forefront, Miller said. All 68 competitors were tracked using the Deployable System for Training and Readiness (DSTAR). They each carried an emergency response kit with a military GPS, a set of batteries, a chem light, a whistle, an MRK radio with preset emergency station and one red star cluster. They were also briefed on how to react in emergency weather situations.

Company and battalion chains of command kept in steady contact with Lawson Army Airfield and were apprised of the severe weather cell, which eventually developed into a tornado, headed for the area, Miller said.

"Based on these weather conditions and visible atmospherics in the training area, the decision was made to end the course at Checkpoint 3 and begin consolidating competitors using their DSTAR," he said.

Checkpoints went into lightning lockdown procedures while competitors were collected and transported back to Camp Rogers, where they were placed in the student barracks to wait out the lightning and tornado.

"Several actions led to the successful and safe execution of this event under these extreme conditions," Miller said. "Most important was the planning and analysis at all levels to prepare for and mitigate risks. The forward positioning of leaders on the ground, leader experience, a functional communication architecture and multiple layers of contingency plans created the conditions for accurate and rapid information flow throughout these extraordinary circumstances. In the end, the safety of the competitors and support personnel was the primary influence for all decisions."



BETWEEN A JACK AND A HARD SPOT

NAME WITHHELD BY REQUEST



There I was … trapped like a monkey with its hand stuck in the cookie jar!

I purchased a Boss Hoss motorcycle several years ago. In case you don't know, this motorcycle has a small-block Chevrolet V-8 engine. The bike had 400 horsepower and, when gassed up, weighed 1,200 pounds. After owning the bike for just under a year (still under warranty), I noticed a slight tick coming from the left rocker cover. I called the dealer, and he told me to bring in the bike. It was going to be a two-hour drive and I had to leave the bike with him. But that wasn't going to be a problem because I had a truck and a utility trailer that would handle the job.

I loaded the bike onto the trailer and drove to the dealer without incident. I then left the bike and trailer with him and returned home. A week later, he called and told me he couldn't find anything wrong with the bike and to come pick it up. I drove back to the dealer, loaded the bike onto the trailer and started for home.

It was a hot day, so I rolled up the windows and turned on the air conditioner. I had a good country station playing nice and loud over the radio. Life was good until I noticed the guy behind me flashing his lights. With my big turbo diesel truck, I hadn't noticed the left tire on my trailer had blown out and I was dragging the trailer on the rim. I was on a two-lane county road with very little room to pull off, so I ended up half on and half off the road. I carried two spares since I'd had previous blowouts with this trailer before — probably because my motorcycle was only a couple hundred pounds under the trailer's maximum load capacity. Both blowouts were due to the rubber valve stems letting go on the 90-psi tires.

This time, the blowout had done some damage, since I had driven for a while before noticing it. Apparently, when the tire blew, it curled the trailer fender back and under a little. I grabbed the jack and the spare tire and got to work, constantly looking over my shoulder for traffic since I was still halfway in the road. I was out in the country, so there wasn't much traffic — just the occasional driver that would slow down, gawk and keep going. In the middle of the tire changing, a fire truck rolled by. Initially, I thought they were going to help me, but they didn't stop.

Anyway, I got the trailer jacked up, the old tire removed and the new tire on and (the lug nuts) tightened. That was when things started to go wrong. I had the bright idea to straighten out the fender, so I grabbed it and gave it a pull while resting my left hand on top of the tire. When I pulled, the jack popped out. Then gravity kicked in and dropped the fender onto my hand, trapping it against

the top of the tire and squashing the crap out of it. Did I mention my bike weighed 1,200 pounds?

I tried to pull my hand out, but it wouldn't budge. I was trapped like a monkey with its hand stuck in a cookie jar. So there I was, halfway in the road with my hand caught and starting to bleed and nobody around. The main thought going through my head at that point was how stupid this whole situation was. I've always said if you're going to be stupid, you've got to be tough and I'd been fairly tough my whole life. That's when it hit me — I could grab the jack with my free hand, put it back into position and jack the trailer off my trapped hand. It worked like a champ. I had the trailer off my hand in maybe 30 seconds and applied a rag to my injury.

I finished getting the tire and fender situated and drove home without further problems. My hand was sore for a couple weeks, but wasn't permanently damaged. I was definitely lucky; things could have been a lot worse. Halfway out in the road like I was, I could've been hit by a passing vehicle. Or, I could've been like the driver who passed by me and crashed while going around the bend. He ran off the road, went down a 10-foot embankment and rolled upside down. That's where the fire truck was headed. I'm not sure what that driver suffered, but I'm sure his injuries were a lot worse than mine.

The lesson I learned from this situation is just because a trailer tire is rated for a given weight doesn't mean it's rated for high speeds. My tires were fine for short trips around town, but on the highway they overheated and eventually failed.«



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ARMY SAFE IS ARMY STRONG

The COTTER PIN

CHIEF WARRANT OFFICER 3 EDWARD N. FITZGERALD II
615th ASB, 1st ACB, 1st Cavalry Division
Fort Hood, Texas



I crewed rotary-wing aircraft for the first 12 years of my career before becoming a rated aviator. I'd like to share an experience I had while serving in a CH-47D company as a flight engineer.

The aircraft I was assigned had been phased in February 1995. In April 1995, the 6th Cavalry Brigade had an unfortunate accident with a CH-47D that had recently come out of phase and was in track-and-balance status. A faulty lower drive arm bolt on the forward rotor assembly had sheared in flight, causing the blades to de-phase. As a result, Safety of Flight Message CH-47-95-02, Inspection and Torque Check of Lower Drive Link to Swashplate Retaining Hardware, was issued. This message required a visual inspection of the drive arm assemblies on both the forward and aft swash plates. The inspection was to verify a minimum 0.005-inch clearance existed between the threaded end of the bolt and the inside of the lug/swash plate ring, and a minimum 0.001-inch clearance between the bolt head and the lug face of the swash plate.

My company complied with the requirements and we started the inspections immediately. We had six airframes that failed, mine being one. The plan was to come in the next day (Saturday) with a maintenance team and further inspect and correct the deficiencies. Once we had the forward head locked out, we discovered why my aircraft had failed the forward drive arm check. It was because someone failed to install the lower slip bushing.

When starting the corrective procedure of disassembling the drive arm, I removed the cotter pin from the castellated nut on the middle bolt and was surprised to see the bolt had not been torqued. The hardware, per the technical manual, required a minimum of a 400 inch-pounds of torque. It was not present. In addition to this fault, a sleeve bushing had been installed instead of the required hat bushing. The lack of the proper bushing caused the hardware to loosen over the 40 hours since its assembly in phase. The middle drive arm bolt was put together with an improper bushing installed and washer stack up (e.g., a thick washer with several thin washers). This gave the appearance of a proper gap and the technical inspectors (TI) signed off during the scheduled maintenance months earlier. We made all corrections on the airframes and returned them to service.

To this day, I have that cotter pin on a key chain to remind me that no matter how many mechanics, crewmembers, TIs and pilots look at an airframe, there can still be concealed faults or deficiencies with it. No one person or maintenance system is perfect. If something doesn't look right or if you're unsure about a maintenance issue, it's better to ask questions and get a second set of eyes on it before it's too late.



Diver Down

NAME WITHHELD BY REQUEST

I consider myself a fairly experienced diver. I've had more than 30 dives, along with an advanced scuba certification and a couple of specialty certifications. I also learned to dive in water that had limited visibility, which was usually anywhere from five to 10 feet on good days. My diving experiences had been fairly uneventful in terms of emergencies or accidents, but that was about to change.



After returning from a deployment to Iraq, I was looking forward to getting back into scuba diving. On this particular weekend, a friend from my company and I planned a dive at a local scuba park at a lake. We arrived at the park, got a map of the dive area and decided to try and find a sunken sailboat that was located just off of one of the dive platforms.

As we prepped our gear, we talked out the dive. We decided my friend would lead since he had been to the park before and I was unfamiliar with the site. We also discussed different hand signals and what to do in case of an emergency. We then performed our buddy checks and got into the water.

From the dive platform, we followed the marker down to the sunken sailboat. Visibility was about five feet, but I didn't think much of it because I'd dived in worse conditions. After we checked out the sailboat, we headed back to the platform to continue to the next marker. I was still following my buddy when I started to experience a spinning sensation.

I began talking myself into staying calm, but when the feeling didn't subside, I had to concentrate on not panicking. I made the decision to grab onto my buddy and tell him to ascend. Normally, I would have stayed underwater to get things under control. However, I was 70 feet below the surface and well aware that if I did lose control, things could go bad very quickly. Fortunately, my buddy wasn't suffering from the same effects and was able to lead me back to the surface.

I wasn't sure what caused this spinning sensation that wouldn't subside, but I didn't have the telltale "drunk" feeling associated with nitrogen narcosis. In the past, I'd been on dives as deep as 95 feet without any issue. After discussing it with some other divers, I realized I'd become disoriented because I lost visual reference with the bottom of the lake. Instead of keeping the bottom in sight, I was watching my buddy.

I attribute two things for the successful outcome of this incident. First, I followed the "buddy rule." My dive partner was able to get me to the surface while I concentrated on staying calm. Second, and most important, was my training. I was able to recognize something was wrong and the potential danger of it. Our training on hand signals also allowed us to speak the same language underwater.

For some, training is nothing more than a check-the-block activity. However, when you put in the time and effort to do it right, it can save your life.«



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THE EPIPHANY

BOB VAN ELSBERG
Strategic Communication Directorate
U.S. Army Combat Readiness/Safety Center
Fort Rucker, Ala.

Was it worth taking the chance of never seeing my fiancee again just to prove I was faster than someone else?

I was home on leave in San Diego from my duty assignment in Hawaii. I'd met a girl while I was home the previous Christmas and had fallen in love with her and proposed. She'd accepted and we were engaged to be married.

It was summer now and I'd taken two weeks' leave to fly home and spend some time with her and my parents. At the time, my means of transportation was a street bike. It was the biggest and fastest bike I'd owned.

My fiancé lived in a city about 12 miles from my parents' home. I'd taken her out that night and was headed home when I got to an intersection with University Avenue — the main street running through La Mesa, Calif., where my folks lived. At the time, my clutch cable needed to be lubricated and I was having trouble smoothly pulling away from a stop. As I waited at the light, three guys pulled up in a car in the lane to my right. When the light turned green, I had to "goose" the throttle and slip the clutch a bit to get going. The guys in the car heard my engine rev up and yelled, challenging me to a street race. I thought, "Why not — it's almost midnight and traffic is nil." I knew I could put these guys in my rearview mirror.

I grabbed a handful of throttle and started working my way through the gears. I was in fourth passing through 85 mph and ready to shift into fifth and go for the money. Then I looked ahead and time seemed to freeze. On the left, I saw a bar, which was still open. I glanced at the cars in the parking lot. Was anyone getting ready to pull out? There wasn't a concrete divider between the eastbound and westbound lanes. There wasn't anything to keep someone from pulling across the road in front of me. In fact, would they even bother to look? And who'd expect me to be doing 80-plus mph on a 35-mph street?

Then I looked ahead to the next intersection. At the moment, the light was green — would it still be that way when I got there? What if somebody turned in front of me at the last second? By then I'd be doing more than 100 mph. Even if I saw them, I'd be going too fast to stop. My grandfather rode Harleys back in the 1930s. He once T-boned a car and was thrown halfway through the driver-side window. He'd suffered back pain ever since. And he wasn't going half as fast as I was.

Then I thought about the girl I was going to marry. On my hotness scale, she was a 10. I never thought I'd get lucky enough to have a girl like her. Was it worth taking the chance of never seeing her again just to prove I was faster than someone else? If I crashed, what would that do to her and our dreams of having a family together?

Then I thought about my parents. I loved them both and they loved me. I was only 21 — what

would it do to them if I did something stupid and died within a mile of home.

In that moment, I had my epiphany. I realized winning a street race really didn't matter much. Sure, it might boost my ego for the moment, but how long was that good for? Besides, who would know except me and the guys in the car? And if I won, they weren't going to tell anybody. Was that worth dying for?

I realized how crazy it was for me to gamble my life for nothing more than an ego trip. I rolled off the throttle and the car passed me. The guy in the backseat flipped me the bird and called me things I won't repeat. By then, I could've cared less. So they insulted me — big deal, what's that next to being dead? And what do I care what they think anyway?

Never since that night have I been tempted to street race. Before composite risk management (CRM) was invented, I'd used the process and it proved sound. I'd identified the hazards, assessed them and recognized the only good control measure was to back off. And let me tell you from experience, the "supervise and evaluate part" has worked out well. I like being around to celebrate more birthdays.

When young Soldiers die in accidents, I think about all the years, relationships and good times they'll never get. For a thrill, or maybe an ego trip, they got cheated out of three-quarters of their life and all that would have held. When you choose not to be safe, it's like playing cards with the devil. Who do you think is going to win?«



"I **REALIZED** how **CRAZY** it was for me to **GAMBLE** my life for **NOTHING** more than an **EGO** trip."


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Just Out For A

Your engine quits and your aerobatic airplane becomes a heavy glider. You do an eyeball scan of the local real estate, and the available options don't include an airfield. Gravity isn't going to wait, so you're going to have to make some quick risk management decisions.

It was a particularly hot day during August 2010, and I was nearing completion of my second sortie with a young lieutenant. We were flying in a Zlin 242L, a popular fixed-wing trainer made in Czechoslovakia, taking advantage of the aircraft's aerobatic capabilities to practice upset recovery and spin training.

Our flight had gone well until we decided to do one final spin and recovery before quitting for the day. The student entered the spin as instructed and the recovery was going very smoothly until he tried to apply power while pulling out. I watched as he applied power, but didn't hear the sometimes-deafening roar of the engine. I asked him to try again, but nothing happened. I then asked for the controls and immediately trimmed the aircraft for its best glide speed.

My first thought was, "Is this real?" The situation was unfolding just as I'd been told it would during a real in-flight emergency. I'd practiced handling engine failures in flight many times during my initial training and it was ingrained in me to quickly find a place to land.



Earlier in the flight, I'd noticed and pointed out to the student a paved drag strip that, at first glance, seemed to be a good spot for a forced landing. I asked the student to see if he could locate the drag strip. After a second or two, he said he couldn't. While he was searching for the drag strip, I reached for the engine failure in-flight checklist. Having run the checklist once from memory, I asked the student to read aloud the steps while I executed his commands. After an unsuccessful second attempt to start the engine, I called dispatch to let them know I had an engine failure and asked them for any ideas.

After explaining that I had run the checklist twice, they said, "Find a place to put it down." On my second radio, which was tuned to Cairns Army Airfield approach control, I declared an emergency for an engine failure. Remembering there were other Zlin's out that day with similar N-numbers, I wanted to be

SPIN

MORGAN MCLEOD
Flight Safety International
Dothan, Ala.



perfectly clear which aircraft was in distress. My radio call started with, "Cairns approach, Zlin 149FS," and ended with, "Zlin 149FS."

Meanwhile, my student was doing the three things I'd briefed him to do in case of a forced landing — shut off the fuel selector valve, turn off the master switch and crack open the canopy. I cannot stress enough the professionalism with which this student conducted himself.

Having chosen a field, I committed to landing and would not change my mind. That proved to be a hard impulse to fight, especially when I saw a nice empty road which, I found out later, was crossed by several power lines. However, I was convinced that this nicely groomed peanut field would be soft and we could land into the prevailing north winds. As the main wheels touched the tops of the peanut plants, I noticed a ditch just ahead of us. Announcing, "Hold on," I pulled hard on the stick as we floated over the ditch and landed softly on the other side. Neither the aircraft nor we suffered any damage.

I am absolutely certain that my training, from pre-solo through multi-engine, is what allowed us to walk away safely from this emergency landing. Also, the poise and composure which the lieutenant and I were able to maintain allowed for safe and productive crew resource management.

I was honored recently with the Broken Wing Award, which was presented by Brig. Gen. William T. Wolf, director of Army safety and commanding general of the U.S. Army Combat Readiness/Safety Center. Receiving that award was one of the proudest moments of my life.

Editor's note: The author has worked with Flight Safety of Dothan, Ala., for more than two years, helping U.S. Army helicopter pilots transition to flying fixed-wing aircraft. Students begin their training with the Cessna 182, then transition to the simulator training on the Beech King Air 200 (Army C-12), followed by training on the aircraft they'll be assigned to flying.

> "I **AM** absolutely **CERTAIN** that my **TRAINING**, from **PRE-SOLO** through multi-engine, is what allowed us to **WALK** away **SAFELY** from this **EMERGENCY** landing. Also, the poise and **COMPOSURE** which the lieutenant and I were able to **MAINTAIN** allowed for **SAFE** and **PRODUCTIVE** crew resource **MANAGEMENT**."



AVIATION

AH-64D



CLASS C

- The crew was conducting high-altitude environmental training when the aircraft experienced a No. 2 engine driveshaft failure. The crew was able to land without further incident.

CH-47D



CLASS B

- The aircraft struck power lines during climb-out from a resupply mission for a local exercise. The crew retained control of the aircraft and executed a precautionary landing.

OH-58D(R)



CLASS B

- The aircraft's engine failed following indications of fuel boost pump failure, low fuel pressure warning and RPM fluctuations. The aircraft entered autorotation and landed hard with damage. There were no injuries. The engine failure was caused by a malfunctioning fuel check valve.

TH-67A



CLASS C

- The aircraft sustained damage associated with spike knock during a demonstrated autorotation for a contractor instructor pilot evaluation.

UH-1H



CLASS C

- The aircraft experienced engine compressor failure during a service flight. The aircraft descended and landed under pilot control, but experienced slight fuselage damage while clearing trees.

UAS

MQ-1C



CLASS A

- The unmanned aircraft (UA) crashed preceding a high-altitude test flight. The UA was destroyed.

CLASS C

- The UA initiated an uncommanded trajectory during takeoff. The UA proceeded off the runway, coming to rest on gravel.

RQ-7B



CLASS B

- The UA experienced a spike in operating temperature and engine-out during return descent. The UA crashed.

CLASS C

- During landing, the UA initiated an uncommanded acceleration and struck the safety net, resulting in damage.

- The operator team lost link with the UA during flight and was unable to track its location from that point. The UA was never recovered.



GROUND

ACV



CLASS A

- A Soldier died after he was pinned underneath a Mine Resistant Ambush Protected All-Terrain Vehicle that overturned during a sharp down-slope turn. The Soldier was using a gunner restraint system.

CLASS B

- An armored reconnaissance vehicle was damaged when a fire started in the rear wheel well.



Editor's note: Information published in the accident briefs section is based onw preliminary loss reports submitted by units and is subject to change. For more information on selected accident briefs, e-mail safe.knowledge@conus.army.mil.

AMV

CLASS A

- A civilian died from burns he suffered when the tractor-trailer he was driving caught fire during a supply convoy.

Personnel Injury

CLASS A

- A Soldier drowned during a diving exhibition after becoming separated from her dive buddy. The Soldier was a certified master diver.
- A Soldier died after he was struck in the neck with a round from another Soldier's M9.
- A Soldier drowned during a whitewater rafting trip when her raft struck a rock and overturned.

DRIVING

POV

CLASS A

- A Soldier was killed when he left the road in an S-curve and struck a concrete bridge support. Seat belt use was not reported, but the vehicle's airbags deployed.
- A Soldier died when he was speeding in a sports car and went off the road and struck a utility pole. The Soldier and his passenger were both wearing their seat belts.
- An unbelted Soldier-passenger died when he was partially ejected from a speeding pickup that went off the road, struck a concrete barrier and overturned. The Soldier-driver and another Soldier-passenger were also unbelted and thrown around inside the vehicle, suffering non-life-threatening injuries. The Soldier-driver was intoxicated.
- Two Soldiers died when their vehicle went off the road, struck a tree and burst into flames.
- A Soldier was killed when he was driving after dark and struck a boulder that rolled into his lane on an interstate highway.
- A Soldier driving too fast for the road conditions hit a patch of ice, slid into the oncoming lanes and collided head-on with an approaching vehicle. The Soldier was hospitalized and died after being removed from life-support.
- A Soldier died in a multivehicle crash when his car was struck from behind and pushed underneath the rear of a pickup ahead of him.
- A Soldier was killed in a single-vehicle crash on the interstate.
- A Soldier was killed when he ran a stop sign, was hit by another vehicle and lost control, crossed the median and struck a pickup in the oncoming lanes. Although the Soldier-driver and his two Soldier-passengers were wearing seat belts, he suffered severe head injuries and later died after being removed from life support.

POM

CLASS A

- A Soldier suffered a permanent total disability injury when his motorcycle collided with a vehicle that pulled out in front of him at an intersection. Although the Soldier was wearing full personal protective equipment (PPE), he sustained a serious head injury.
- A Soldier was riding a recently purchased motorcycle when he lost control at a three-way intersection, crashed and was killed. The Soldier was wearing a helmet, but may not have been properly licensed to ride.
- A Soldier suffered a permanent total disability injury when he lost control of his motorcycle and crashed. Authorities report he was riding at a high rate of speed.
- A Soldier was killed when he sped through a lighted intersection and rear-ended a pickup truck. The Soldier was licensed and had safety training but was not wearing any of the required PPE.



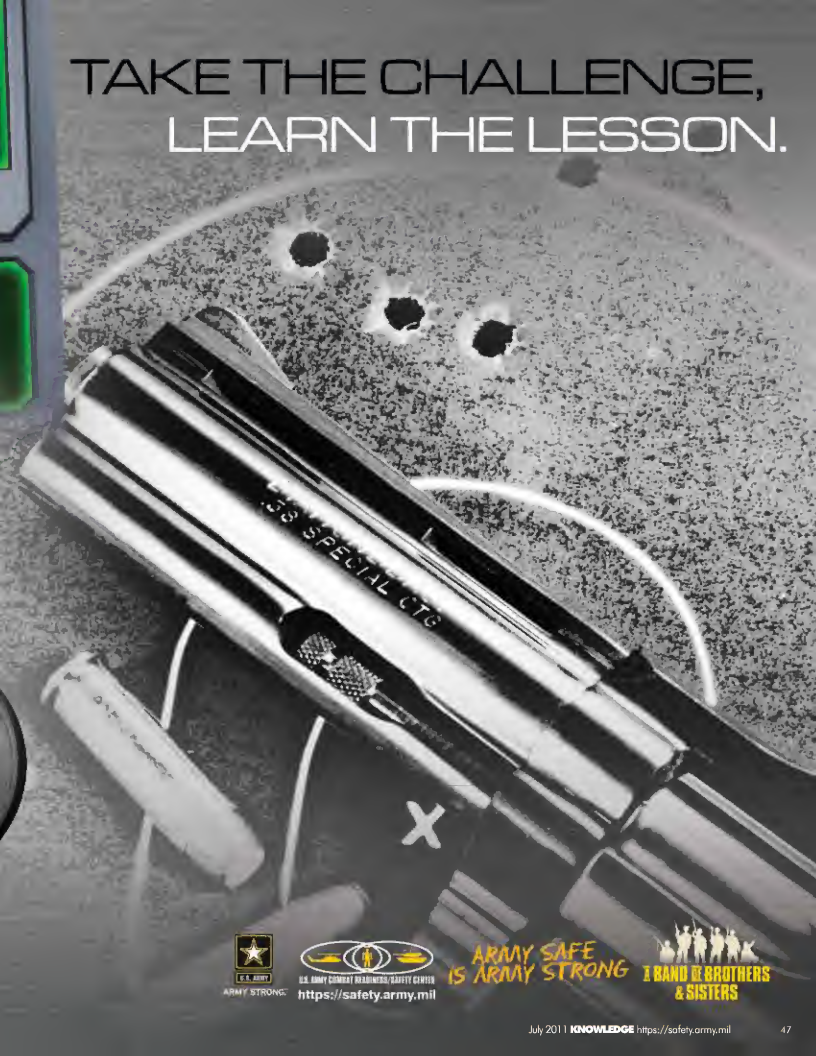


Firearms Safety Techniques, an interactive site, is available for Soldiers, Family members and Civilians to learn about off-duty safe firearms handling. Visit the site for more useful firearms safety resources.

FIREARMS safety techniques

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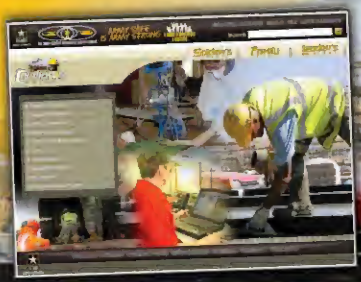

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